AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-4 (canceled).

Claim 5 (new): A radar comprising:

a scanning unit which transmits and receives a detection signal and which varies a beam azimuth of a detection radio wave over a predetermined scanning angular range;

a signal-strength profile determining unit which determines a signal-strength profile from changes in strength in the azimuthal direction of a received signal from a target at a position that is spaced from the scanning unit as a function of the beam azimuth; and

an estimating unit which estimates the target azimuth causing the signal-strength profile from the signal-strength profile, which is a portion of a convex located adjacent to the outermost angle in the scanning angular range.

Claim 6 (new): The radar according to Claim 5, wherein the estimating unit estimates the target azimuth from the ratio between the received signal strengths at at least two beam azimuths.

Claim 7 (new): The radar according to Claim 6, further comprising a reflectivity determining unit which determines a reflectivity of the target on the basis of the

difference between the received signal strengths of the two beam azimuths and the directional characteristic of an antenna that forms the above-described beam.

Claim 8 (new): The radar according to Claim 5, wherein the estimating unit estimates the target azimuth from the number of beams having received signal strengths exceeding a threshold level and from the received signal strength of at least one of the beams in an azimuth range of half of a beam width, from the outermost angle, having antenna gains exceeding a predetermined threshold level.

Claim 9 (new): The radar according to Claim 5, wherein the scanning unit includes a primary radiator and a motor for translating the primary radiator in a plane parallel to a focal plane of a dielectric lens.

Claim 10 (new): A method of estimating a target azimuth of a target that is outside of and adjacent to a scanning angular range of a radar, the method comprising the steps of:

transmitting and receiving a detection signal and varying a beam azimuth of a detection radio wave over a scanning angular range using a scanning unit;

determining a signal-strength profile from changes in strength in the azimuthal direction of a received signal from a target at a position that is spaced from the scanning device as a function of the beam azimuth; and

estimating the target azimuth causing the signal-strength profile from the signal-strength profile, which is a portion of a convex located adjacent to the outermost angle in the scanning angular range.

Claim 11 (new): The radar according to Claim 10, wherein the step of estimating includes the step of estimating the target azimuth from the ratio between the received signal strengths at at least two beam azimuths.

Claim 12 (new): The radar according to Claim 11, further comprising the step of determining a reflectivity of the target on the basis of the difference between the received signal strengths of the two beam azimuths and the directional characteristic of an antenna that forms the beam.

Claim 13 (new): The radar according to Claim 10, wherein the step of estimating includes the step of estimating the target azimuth from the number of beams having received signal strengths exceeding a threshold level and from the received signal strength of at least one of the beams in an azimuth range of half of a beam width, from the outermost angle, having antenna gains exceeding a predetermined threshold level.